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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEURIG, SHARLENE L

ART UNIT PAPER NUMBER

2879

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

BEST AVAILABLE COPY

Office Action Summary

Application No.

09/915,721

Applicant(s)

SCHERMERHORN ET AL.

Examiner

Sharlene Leurig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 8-10, 16 and 25 is/are rejected.
- 7) ☒ Claim(s) 2-16 and 25 is/are objected to.
- 8) ☒ Claim(s) 1-29 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-16 and 25 in Paper No. 7 is acknowledged. The traversal is on the ground(s) that the process of use claims are not distinct from the product claims. This is not found persuasive because the product as claimed can be used in a materially different process of using the product, for instance by employing separate voltage drivers for each electrode, since the plasma display device does not necessarily have shared electrode pads between sustainer electrodes.

The applicant has argued that because "independent claim 17 recites that a pair of sustainer electrodes are connected to a common electrode pad, applicants do not believe that a plasma panel having the structure in claim 17 can be used in a process employing separate voltage dividers for each electrode" (page 2, last paragraph).

In response to this argument, the examiner points out that claim 17 is a process of use claim, not a product claim. The examiner based the restriction on the product being usable in a process of use without the limitation of claim 17 of the device having common electrode pads. The applicant's citation of a method of use claim does not address the distinctness of the product claims from the process of use claims.

The applicant has further argued that a limitation in method claims 17 and 28 "specifically states that a pair of sustainer electrodes are connected to common electrode pad" and therefore "the process as claimed can not be practiced with another materially different product" (page 3, first paragraph).

The Examiner's reason for restriction was that the product could be used in a different process of use than claimed, not that the process for using the product could be used with a different product. Showing that the product could be used in a different process of use than claimed is sufficient for showing distinctness.

The applicant has further argued that independent product claim 1 "does not recite electrodes connected to a common electrode pad" (page 3, second paragraph).

The examiner agrees that claim 1 does not recite the limitation of the electrodes connected to a common electrode pad. Indeed, the absence of that limitation was used by the examiner to make the restriction by showing the distinctness between the product claims and the process of use claims.

The applicant has further argued that claims 21 and 29 have no common electrode pad, and are therefore not restrictable from claim 1.

The examiner grouped the claims into two restrictable groups, Group I consisting of product claims 1-16 and 25 and Group II consisting of process of use claims 17-24 and 26-29. Product claims 16 and 25 are distinct from process claims 21 and 29 because of their distinct structure, and therefore Group I is distinct and restrictable from Group II.

The applicant has further argued that product claim 25 is not distinct from process of use claims 17 and 28.

Product claim 25 is distinct from claim 17 because of the different structures of the displays of each claim. Claim 25 recites the limitation of the "first sustainer electrode in said second pair of sustainer electrodes is adjacent to said other of said trigger

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electrodes" (lines 22-24), while claim 17 recites the limitation of "the first sustainer electrode in the second pair of sustainer electrodes is adjacent to the auxiliary electrode" (lines 17-18). Furthermore, claim 25 recites the limitation of both "a single common first sustainer electrode pad" and "a single common second sustainer electrode pad", while claim 17 recites only the limitation of "a single common first sustainer electrode pad". Regarding the distinctness of product claim 25 from process of use claim 28, claim 28, like claim 17, has the limitation of "the first sustainer electrode in the second pair of sustainer electrodes is adjacent to the auxiliary electrode" (lines 13-14) and also has only a "single common first sustainer electrode pad" (line 15). Therefore claims 17 and 28 are distinct and restrictable from claim 25.

The requirement is still deemed proper and is therefore made FINAL.

Examiner's Notes

2. Claim 16, line 14 currently reads "adapted to connected to a first sustainer voltage". The grammatical error should be amended.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 16 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites the limitation "said trigger electrodes" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "said other of said trigger electrodes" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 25 recites the limitation "said trigger electrodes" in line 19. There is insufficient antecedent basis for this limitation in the claim.

Claim 25 recites the limitation "said other of said trigger electrodes" in line 23. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schermerhorn (5,723,945) (of record) in view of Kanazawa et al. (6,288,692).

Regarding claim 1, Schermerhorn discloses a plasma flat-panel display comprising a first transparent substrate (12), an array of pairs of parallel sustainer electrodes deposited upon the first substrate, two of which are shown in Figure 7, element 20, each of the pairs having a first sustainer electrode and a second sustainer electrode, a dielectric layer and a protective layer formed of electron emissive material

covering the dielectric (22 and 23), a second substrate (14) hermetically sealed to the first substrate, an array of micro-voids (26) that can be formed into the surface of the second substrate (column 5, lines 39-41), a plurality of address electrodes (40) incorporated within the second substrate, orthogonal to the sustain electrodes and corresponding to the micro-voids (column 7, lines 43-47), which cooperate with the first substrate to define a plurality of subpixels, each of which defines a controlled discharge volume at the intersection of the address and sustainer electrodes, a phosphor material deposited within each micro-void and associated with the address electrodes (column 7, lines 64-67), and a gas filling the micro-voids (column 8, lines 52-59).

Schermerhorn lacks disclosure of auxiliary electrodes formed on the first substrate.

Kanazawa teaches three sets of electrodes formed on the first substrate of a flat plasma display, including Y electrodes, Xe electrodes and Xo electrodes (Figure 14; column 10, lines 27-39). All three electrode sets are connected to sustain voltage drivers. The Xe and Xo electrodes can be interpreted as the first sustainer electrode and the second sustainer electrode, respectively. The Y electrodes are deposited on the first substrate parallel to and corresponding to each of the pairs of sustainer electrodes Xe and Xo, and at least one is adjacent to the first sustainer electrode Xe can be interpreted as auxiliary electrodes.

Regarding claim 8, the auxiliary electrodes (Figure 14, element 51) are positioned between the first (52o) and second (52e) sustain electrodes.

Regarding claim 9, the auxiliary electrodes (Figure 14, element 51) are positioned outside of the first (52o) and second (52e) sustain electrodes. The first and second electrodes are grouped in pairs separated by slits 73 (column 10, lines 21-22), shown on the far left side of Figure 14. The Y electrode is interposed between those pairs, as shown in Figure 14. Therefore the Y electrode can be seen as being outside of the sustain electrodes.

Regarding claim 10, the sustain electrodes 52o and 52e are of the same width, as can be seen in Figure 14, but are of different width than the auxiliary electrode 51.

Kanazawa teaches this formation of electrodes in order to provide a plasma display that prevents deterioration of contrast and minimizes power consumption (column 2, lines 35-38).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schermerhorn's plasma display with auxiliary electrodes positioned adjacent sustainer electrode pairs in order to provide a plasma display that prevents deterioration of contrast and minimizes power consumption, as taught by Kanazawa.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6,459,201 to Schermerhorn et al. (of record), formerly application number 09/376,130. Although the conflicting claims are not identical, they are not patentably distinct from each other because both claims include the limitations of a first transparent substrate, at least one pair of parallel sustainer electrodes deposited upon the first substrate, each of the pairs of sustainer electrodes including a first sustainer electrode and a second sustainer electrode, a dielectric layer formed from a dielectric material covering the electrodes, a protection layer formed from an electron emissive material covering the dielectric layer, which is claimed in claim 2 of the patent, a second substrate which is hermetically sealed to the first substrate comprising an array of micro-voids formed in the surface of the second substrate which is adjacent to the first substrate, a plurality of address electrodes incorporated within said second substrate, each of said address electrodes corresponding to the sub-pixels, a phosphor material deposited within each micro-void and associated with said address electrodes, and a gas filling said micro-voids. The sole difference between claim 1 of the outstanding application and claim 1 of the patent is that the patent claim refers to a "control electrode" rather than an "auxiliary

electrode" deposited upon the first substrate parallel to the sustainer electrodes.

However, this difference is nominal and therefore obvious.

Allowable Subject Matter

9. Claims 2-7 and 11-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 16 and 25 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

11. The following is a statement of reasons for the indication of allowable subject matter:

The Examiner notes that the Prior Art of Record discloses a plasma display having a first transparent substrate, pairs of parallel sustainer electrodes deposited upon the first substrate, including first sustainer electrodes and second sustainer electrodes, at least one auxiliary electrode deposited on the first substrate parallel to the first pair of sustainer electrodes, one of the auxiliary electrodes being adjacent to the first sustainer electrode in the first pair of sustainer electrodes, a dielectric layer covering the sustainer electrodes, a protection layer covering the dielectric layer, a second substrate which is hermetically sealed to the first substrate with a plurality of micro-voids formed in a surface adjacent to the first substrate, the micro-voids cooperating with the first substrate to define a plurality of sub-pixels, a gas filling the micro-voids, a phosphor material deposited within each micro-void, and a plurality of

address electrodes incorporated within the second substrate, each of the address electrodes corresponding to one of said sub-pixels.

Regarding claims 2-7, the references of the prior art of record fail to teach or suggest the combination of limitations as set forth in claim 2, and specifically comprising the limitation of the plasma display having the structure of claim 1 further having auxiliary electrodes connected to associated auxiliary electrode pads connected to individually controllable waveform supplies in conjunction with the driving setup of the first and second sustainer electrodes and address electrodes as claimed.

Regarding claims 11-15, the references of the prior art of record fail to teach or suggest the combination of limitations as set forth in claim 11, and specifically comprising the limitation of the plasma display having the structure of claim 1 further having first and second sustain pairs that are alternately mirrored along the array.

Regarding claim 16, the references of the prior art of record fail to teach or suggest the combination of limitations as set forth in claim 16, and specifically comprising the limitation of the second sustainer electrode pair being oriented upon the substrate as a mirror image of the first sustainer electrode pair, a single common first sustainer electrode pad electrically connected to the first sustainer electrode in the first sustainer electrode in each pair, and connected to a first sustainer voltage waveform supply in order that a single supply provides a first sustainer voltage waveform to both of the first sustainer electrodes.

Regarding claim 25, the references of the prior art of record fail to teach or suggest the combination of limitations as set forth in claim 25, and specifically

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comprising the limitations set forth above in reference to claim 16 and additionally the limitation of a single common second sustainer electrode pad electrically connected to one end of the second sustainer electrode in the second sustainer electrode pair and the other end of the second sustainer electrode being connected to a corresponding end of the second sustainer electrode in the first sustainer electrode pair.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharlene Leurig whose telephone number is (703)305-4745. The examiner can normally be reached on Monday through Friday, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703)305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Sharlene Leurig
September 8, 2003



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